

THEODORE J. VONK
Chairman

GARY ROLLS
Vice Chairman

WILLIAM BYL
Secretary

DAVID GROENLEER
DAN KOORNDYK
SHANA SHROLL
RICHARD VANDER MOLEN

DOUGLAS G. WOOD
Director



Board of Public Works

AGENDA

March 1, 2011

8:00 AM

Earl G. Woodworth Building
Meeting Room Chambers
1500 Scribner Avenue NW
Grand Rapids, Michigan 49504

- I. Call to Order
- II. Public Comment
- III. Review and Approval of Minutes
- IV. Administration
 - A. Employee Service Recognition
 - 1. Elizabeth Porczynski - Account Clerk 15 years
- V. Utility Services Division
 - A. NKSA Memorandum of Understanding
- VI. Solid Waste Operations
 - A. Mattress Disposal Fee
 - B. South Kent Landfill
 - 1. Garage Roof Repair
 - 2. Paving Contract
 - 3. Soil Borings
 - C. Kentwood Landfill
 - 1. Well Replacement
- VII. Waste-to-Energy Facility
 - A. Extension of Household Battery Recycling/Disposal Contract
- VIII. Conference/Education Travels
 - A. Solid Waste Engineering Society
- IX. Approval of Monetary Outlays
- X. Director's Report
 - A. Solid Waste Plan Amendment/Public Hearing and Comment
 - B. Carbon Credit and Renewable Energy Credit Update
 - C. West Michigan Take Back Meds/MDEQ Grant Application
- XI. Miscellaneous
- XII. Adjournment



COUNTY BOARD OF PUBLIC WORKS

**February 2, 2012
MINUTES**

**Earl G. Woodworth Building
Board Chambers
1500 Scribner Avenue NW
Grand Rapids, Michigan 49504**

MEMBERS PRESENT: Commissioners Rolls, Byl, Groenleer, Shroll, Koorndyk

MEMBERS ABSENT: Commissioners Vonk & Vander Molen

OTHERS PRESENT: Douglas G. Wood, Director; Dan Kendall, Finance Division Director; Dennis Kmiecik, Solid Waste Division Director; Bill Allen, Waste-to-Energy Division Director; Ron Landis, Engineering/Utility Services Director; Gary Segar, Utility Services Superintendent; Steve Achram, Civil Engineer; Phil VanDyke, Risk Coordinator – Risk Management, Fiscal Services; Steve Marshall, Clerk Typist II

I. Call to Order

Vice-Chair Rolls called the meeting to order at 8:00 a.m.

II. Public Comment - None

III. Review and Approval of Minutes

It was moved by Commissioner Koorndyk and supported by Commissioner Groenleer to approve the minutes of the January 2012 meeting.

Motion carried unanimously.

IV. Administration

A. Service Award

Director Wood introduced Gary Seger, Utility Services Superintendent, and presented a 10-Year Service Award. Mr. Seger has been with the Department since 2001 and began as a Utility Operations Worker. In 2006 he was promoted to Senior Utility Worker, and then was promoted again to Superintendent of Utility Services. Mr. Seger also has a farming background which has helped the Department in the field with repairs. He is also a veteran. Mr. Seger and staff have also received compliments from Steve Grimm, Cannon Township Supervisor about the great job done after a force main break. Commissioner Rolls thanked

Mr. Seger for his dedication and service.

B. Department Goals and Objectives Review

Director Wood presented the Department Goals and Objectives for the Board's review. He stated that the Department prepares the annual budget and related goals and objectives for submittal to County Administration in the middle of the prior year. Board Chair Vonk requested that staff provide an overview of the goals and objectives. The following overviews are broken down by division by the Division Directors.

Waste-To-Energy Bill Allen began by focusing on projects that are happening this year. One of them is the feasibility of the Commercial Recycling Facility discussed with the Board. The feasibility will look at the waste stream received to determine what is recoverable. Staff and the consultant will also determine if a processing facility will fit on the site. The Department is researching the possibility of acquiring railroad property in back of the Waste-To-Energy site. Staff will provide the Board progress reports on this project.

We have an ongoing stormwater remediation project on the WTE site. The site has a stormwater outfall to the Grand River. The Department is working with the Michigan Department of Environmental Quality on this project. The Department has constructed and installed a retention pond on the site which collects the water and allows the particulates to settle out. Testing has shown that it has done a really good job and those numbers are very low now. Another issue at the site has to do with B.O.D. (Biological Oxygen Demand) loading in the pond. The Department's focus is the best way to proceed to isolate this problem. Director Wood commented that the plant has been there for twenty-one years. This issue only surfaced early last year. Mr. Allen added that the B.O.D., and there's also E. coli limit for the Grand River which as he understands is related to using the river for swimming. It's The EPA standard that flows through the state to WTE.

Solid Waste Division

Recycling and Education Center Dennis Kmiecik, Solid Waste Operations Director stated after the first year of operation there is a better idea of how the facility runs and what to expect. The Department is evaluating the use of with Goodwill Industries transitional workers. The overall objective is to increase tons processed.

Resource Recovery The Resource Recovery/Household Hazardous Waste Program is the educational portion staffed by three people. The goal is to update all the material in 2012 and continue to make improvements to the West Michigan Take Back Meds Program which started this year and has proven to be successful.

Solid Waste Plan The goal is to complete the Plan amendments for approval in April. Following that process the Plan is submitted to the Michigan Department of Environmental Quality.

Commissioner Byl stated one of the things he continues to hear from people who are either in condos or apartments that they would like recycling opportunities. Further, Commissioner Byl asked the Department staff to prepare a report on the impediments of dealing with recycling at apartment, condo complexes and multi-unit sites to see if there are ways they can be addressed. Director Wood stated that the staff will prepare a report.

Commissioner Rolls stated that he had a couple school groups take a tour of the Recycling Facility and thanked Director Wood and Mr. Kmiecik for putting that together. He received a lot of feedback from a lot of the kids that stated of all the field trips, of all the places they had to go the tour of the facility was the absolute highlight of their entire week.

Commissioner Rolls stated that he received feedback from a couple constituents that commented that it seems cumbersome and difficult for them to be able to unload to the Household Hazardous Waste. The current procedure is to call and make an appointment to bring in household hazardous waste. He asked if that was the way it's normally done and if there was any way to make that easier or streamline. Director Wood said the reason it is done by appointment is for safety. The Department also has only three full time staff members that rotate through collection times, the educational portion and the various other programs that come out of the Household Hazardous Waste Program. Mr. Kmiecik added that there are 8-10 Saturday collection days per year, two at each site, throughout the year. It is advertised and open to try to accommodate people that cannot make it by a phone call. There is a Kentwood site, a Wyoming site and one in Rockford. It is staffed with about ten people in order to regulate what residents bring because items must be sorted carefully. Commissioner Byl asked if latex paint is accepted. Mr. Kmiecik said latex paints are not accepted.

Engineering/Utility Services Division

South Kent Landfill Ron Landis, Engineering/Utility Services Director stated that the first goal for the South Kent Landfill is to maintain all the permits and notice of violations.

Second goal is the design of cell 35. This cell is encroaching on the ground water table. There is also a new paving project for about one third of the road around the site.

Mr. Landis also added that he has started the process of preparing documents for the expansion at the South Kent Landfill into Dorr Township, Allegan. He added that the Department is planning on three to four years for that project to permit a new landfill.

Closed Landfills Sparta Landfill is a Superfund Site in Sparta and preparation is underway for the EPA and DEQ visits to the site this year for a five-year review.

At the Kentwood Landfill we will be implementing a gas extraction system for mitigation.

Utility Services The Department is moving forward with the transfer of operations and maintenance of the North Kent Sewer System to the North Kent Sewer Authority and its member communities. The target date is October 1, 2012.

Finance and Accounting

Dan Kendall, Finance and Accounting Director said one of the goals compare the proforma developed at the time bonds were sold for the Recycling and Education Center with the actual results of 2011.

Administration

Director Wood stated one of the Department goals is to prepare a reorganization and succession plan.

Vice-Chair thanked staff for the reports.

C. Travel Request-WASTECON 2012

Director Wood presented a request to attend this year's WASTECON 2012. They are celebrating their 50th anniversary. WASTECON is SWANA's premier event which allows networking with executives in the waste industry from across the country, training courses, technical sessions, and various exhibits. Staff received notification of an early registration savings of \$200 for Solid Waste Association of North America members. This year WASTECON 2012 will be held in Washington, D.C. at the Gaylord National Harbor Hotel on August 14-16, 2012.

MOTION

It was moved by Commissioner Byl and seconded by Commissioner Groenleer to authorize the Director and any Board member to attend WASTECON 2012 on August 14-16, 2012 in Washington D.C. at an estimated cost of \$2,284.

Motion carried unanimously.

V. Solid Waste Operations

A. South Kent Landfill

1. Roll-Off Truck Bids

Director Wood introduced bids for a new Roll-Off Truck solicited on December 19, 2011 by the Purchasing Division. Thirteen bids and 3 alternate bids were received and evaluated.

The Department has an approved 2012 Capital Improvement Project for the purchase of a new Roll-Off Truck for South Kent Landfill. The Department is replacing the 2001Volvo. The low bidder proposed is a 2013 Freightliner M2-114 SD with an Ampliroll hoist for \$147,311. The three alternate bidders proposed trucks with a Compressed Natural Gas propulsion system. The low bid for the alternates was \$183,570. Staff is recommended the low bid submitted by Marrel Corporation for a 2013 Freightliner M2-112 SD with an Ampliroll hoist at a total purchase price of \$147,311.

Commissioner Rolls commended staff for their product knowledge and professionalism.

MOTION

It was moved by Commissioner Byl and seconded by Commissioner Koorndyk to award the purchase of a Roll-Off Truck to Marrel Corporation of Grand Rapids in the amount of \$147,311.

Motion carried unanimously.

VI. Waste-to-Energy Facility

A. Waste-To-Energy Insurance Coverage

Director Wood presented the WTE property and liability insurance renewals. Staff, through the Kent County Risk Coordinator, Phil VanDyke, solicited proposals from two insurance agencies. The effective date of the insurance policies is March 1, 2012.

Director Wood introduced Phil VanDyke and Bill Allen, WTE Division Director to review the insurance coverage. Mr. Allen said this is something that is done annually. As part of the review they always try and attract new bidders to this renewal process for the liability and property side, this is done so that the Department gets competitive pricing. Mr. VanDyke explained property insurance is through Arthur J. Gallagher, it is recommended to go with ACE, the same carrier as 2011, for a total cost of \$202,171. This is an increase of \$13,500 from the 2011 property premium. For general liability insurance, through IBEX Insurance Agency of Farmington Hills, it is recommended to renew with Chubb along with excess liability from Chubb and Scottsdale Insurance. This premium for liability coverage is an increase from last year of \$7,303 to a total of \$131,994.25. The combined 2012 property and liability premium cost of \$334,165.25 is \$115,834.75 less than the WTE budget of \$450,000.

Commissioner Koorndyk asked if quotes with a higher deductible were received. Mr. VanDyke said the price variance wasn't much different. Commissioner Rolls asked Mr. Allen if there were any claims problems either on the property or with liability at the WTE in the last five years. Mr. Allen said there were not.

MOTION

It was moved by Commissioner Koorndyk and seconded by Commissioner Byl to authorize the Director to acquire insurance coverage for the WTE through Arthur J. Gallagher for property at a premium of \$202,171 and through IBEX Insurance Agency for liability at a premium of \$131,994.25.

Motion carried unanimously.

VII. Approval of Monetary Outlays

MOTION

It was moved by Commissioner Byl and supported by Commissioner Groenleer to approve the Monetary Outlays for February 2012.

Motion carried unanimously.

VIII. Director's Report

A. North Kent Landfill Property/W M Sports Commission

Director Wood had a conversation with both Mike Guswiler and Dick VanderMolen who is on the Sport's Commission (WMSC). There is an agreement to sell the property. In December 2011 the WMSC paid \$5,000 to extend that purchase agreement option. Further, they asked if the Board would consider a lease agreement so that they would pay over time. Mr. Groenleer clarified "lease – purchase" agreement. Director Wood confirmed. Commissioner Rolls added he tried to work with this concept early on to try to get something done and stated anything that can be done to help the process would be great as long as legal counsel doesn't have any problem with it and anything that can be done to help that process and to help it to be successful.

B. Solid Waste Plan Amendment/Presentations

Director Wood invited all the township supervisors to the Recycling & Education Center to present the Solid Waste Plan Amendment overview and lunch on February 13th. On February 23rd he will give the same presentation to the entire Board of Commissioners.

C. SWANA/Senior Executive Seminar Overview

Director Wood gave an overview on the seminar. One of the most important things was that the general counsel for SWANA gave a presentation on legal issues related particularly to solid waste management. Director Wood met with the counsel representative after the meeting for an hour related to the Solid Waste Plan amendments. Director Wood stated that the Department has contracts with six cities and those contracts require them to deliver the waste to the Waste-To-Energy Facility (WTE). These agreements may be defined as "flow control" of solid waste. Since 1995 the Department has had contracts with solid waste companies for delivery to the WTE. These agreements expire at the end of 2012. At that time we will revert back to the city agreements and "flow control". Commissioner Byl asked if opposition was expected from the private haulers to go back to the flow control. Director Wood isn't sure and hasn't discussed it with them yet and would like to get the amendments passed.

Director Wood stated that they had an excellent presentation on conversion technologies. Conversion technologies are the non-traditional conversion technologies. Some things discussed in the session were anaerobic digestion, composting technologies, converting plastics to oil, and others.

IX. Miscellaneous

Commissioner Rolls commented on the landfill methane gas system improvements. Commissioner Rolls further asked how many homes would be using the electricity generated. Mr. Landis said about 2,700 homes. Commissioner Byl asked what volume proportion that output was compared to the WTE. Mr. Allen said the WTE sells on average about 13 megawatts to the grid while the landfill system is 3.2. Commissioner Byl then suggested it is about 25 percent of what the WTE is. Commissioner Rolls expressed a good job done by Mr. Allen and Mr. Landis. Further, he said there should be a way to capture that information in a newsletter or something and let the public know. Commissioner Byl said it's remarkable that the Department has completely integrated a system, landfill, landfill gas, waste-to-energy, recycling, household hazardous waste, all operating under

one system. That's the real benefit of that system. Director Wood added he is impressed with Lancaster County in Pennsylvania. They're adding wind power at their landfill site. Director Wood further stated that the Department is researching solar and windpower alternatives, as well.

X. Adjournment

The meeting was adjourned at 8:57 a.m.

MEETING DATE: **April 7, 2011**

AGENDA ITEM#: V – A



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: Memorandum of Understanding

DIVISION: Utility Services

PREPARED BY: Douglas G. Wood

ACTION REQUESTED:

Review and Approval authorizing Director to execute Memorandum of Understanding with the North Kent Sewer Authority

SUMMARY OF REQUEST:

The Board of Public Works has been briefed on the ongoing discussions concerning the transfer of Utility Services. Department staff has had several meetings with North Kent Sewer Authority staff regarding the transfer of Utility Services operation and maintenance to the North Kent Sewer Authority and its member communities. The existing agreement between the NKSA, its member communities and the Department of Public Works has a provision requiring a termination notification of one (1) year. In our discussions DPW has suggested that the final service day would be December 31, 2012. After several additional meetings we agreed in principle to move that day forward to October 1, 2012.

Attached is a Memorandum of Understanding that outlines the desire of the parties to terminate the Utility Services Agreement on October 1, 2012.

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to authorize the Director to execute the Memorandum of Understanding with the North Kent Sewer Authority whereby the parties agree to proceed in good faith toward termination of the Utility Services Agreement as of October 1, 2012.

ATTACHMENTS:

Memorandum of Understanding

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR: _____

Douglas G. Wood

NORTH KENT SEWAGE DISPOSAL SYSTEM

Memorandum of Understanding Regarding Utility Services Agreement

This Memorandum of Understanding, between the North Kent Sewer Authority, 7 South Monroe Street, Rockford, Michigan 49341 ("NKSA") and the County of Kent, acting by and through its Board of Public Works, 1500 Scribner, N.W., Grand Rapids, Michigan 49504 (the "County"), sets forth the understandings of the parties with respect to termination of the Utility Services Agreement for the North Kent Sewage Disposal System (the "Utility Services Agreement").

1. The Utility Services Agreement, under which the County provides operation and maintenance services for certain components of the North Kent Sewage Disposal System, terminates December 31, 2013, subject to early termination without cause upon one (1) years' prior written notice by a party desiring to terminate the Agreement.

2. The County has indicated that it desires to terminate the Agreement effective October 1, 2012, which will require approval of the NKSA, and each of the individual Municipalities which is a party to the Utility Services Agreement.

3. The NKSA is currently working with its constituent Municipalities to develop a replacement agreement for the Utility Services Agreement, under which the NKSA will provide operation and maintenance services for the North Kent Sewage Disposal System.

4. The purpose of this Memorandum of Understanding is to express the intent of the parties that the Utility Services Agreement shall terminate as of October 1, 2012. Final approval of termination is subject to approval of a contract for operation and maintenance services between the NKSA and its constituent Municipalities, and to confirmation by the governing body of each constituent municipality. The parties agree to proceed in good faith toward termination of the Utility Services Agreement as of October 1, 2012.

NORTH KENT SEWER AUTHORITY

Dated: _____, 2012

By: _____

Michael Young

Its: Chair

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

Dated: _____, 2012

By: _____

Douglas Wood

Its: Director

MEETING DATE: **March 1, 2012**

AGENDA ITEM#: VI – A



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: Mattress Disposal Fee

DIVISION: Solid Waste Operations

PREPARED BY: Steve Achram

ACTION REQUESTED:

Approval of the addition of a mattress and box spring disposal fee of \$10.00 per item at North Kent Transfer Station and South Kent Landfill.

SUMMARY OF REQUEST:

The Board of Public Works usually reviews and approves disposal rates for items disposed at the facilities. Staff has researched the disposal of mattresses as a "special waste" for disposal.

Mattresses and box springs are more labor intensive to handle because they are bulky and do not compact well. We currently do not have a separate disposal fee for mattresses and box springs. We have investigated our actual airspace cost to be approximately \$5.00 – 10.00 per mattress; however, our customers are currently paying approximately \$1.00 per mattress. This is based on reviewing average mattress weights and mattress compaction rates. A separate fee of \$10.00 per item is consistent with other area landfills and would be similar to our tire and appliance disposal fee. Central Sanitary Landfill in Pierson charges \$15.00 per mattress. Autumn Hills Landfill in Zeeland charges \$10.00 per mattress.

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to approve the addition of a Mattress and Box Spring Disposal Fee of \$10 per Item.

ATTACHMENTS:

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR: _____

Douglas A. Wood

MEETING DATE: **March 1, 2012**

AGENDA ITEM#: VI – B – 1



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: South Kent Landfill Garage Roof Repair

DIVISION: Solid Waste Operations

PREPARED BY: Steve Achram

ACTION REQUESTED:

Approval of Modern Roofing, Inc. bid to repair maintenance garage roof at South Kent Landfill.

SUMMARY OF REQUEST:

Bids were solicited by Kent County Purchasing Division on February 17, 2012. The maintenance garage roof at South Kent Landfill is in poor condition with several leaks. The scope of work is to cover the existing metal roof with a waterproof membrane and to warranty the work for 20 years. Modern Roofing met the specifications and was the low bidder at \$16,991. The bid tabulation is attached.

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to award the bid to Modern Roofing, Inc. in the amount of \$16,991.

ATTACHMENTS:

Bid tabulation

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR:

Douglas A. Wood

RFQ 1029 - Roofing - South Kent Landfill

Date/Time Closed	Line	Description	Name	Unit Quote
2/17/2012 10AM	1	Total Roofing Repairs	Modern Roofing, Inc.	\$ 16,991.00
2/17/2012 10AM	1	Total Roofing Repairs	Superior Services R.S.H., Inc.	\$ 17,400.00
2/17/2012 10AM	1	Total Roofing Repairs	Ostrander	\$ 18,000.00
2/17/2012 10AM	1	Total Roofing Repairs	J. Stevens Construction	\$ 18,900.00
2/17/2012 10AM	1	Total Roofing Repairs	Weather Shield Roofing Systems	\$ 18,939.00
2/17/2012 10AM	1	Total Roofing Repairs	Diekevers Roofing	\$ 19,939.00
2/17/2012 10AM	1	Total Roofing Repairs	J & L Roofing Co.	\$ 22,120.00
2/17/2012 10AM	1	Total Roofing Repairs	Great Lakes Systems, Inc.	\$ 23,600.00

Note: This document shall not be construed as a comment on the responsiveness and is subject to change during the review process. This information is not an indicator of award.

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MEETING DATE: **March 1, 2012**

AGENDA ITEM#: VI – B – 2



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: Approval of Paving Contract at South Kent Landfill

DIVISION: Solid Waste

PREPARED BY: Ron Landis

ACTION REQUESTED:

Review and approval selecting Superior Asphalt, Inc. for the Road Replacement Contract

SUMMARY OF REQUEST:

Staff prepared a bid package to replace the pavement for a portion of the South Kent Landfill's north main haul road. The work involves milling, fine grading, and placing base and wear courses.

Five contractors provided bids, of these bidders staff is recommending awarding the contract to the low bidder, Superior Asphalt Incorporated, in the amount of \$53,000. Superior is a well established contractor in the Grand Rapids area and provides a quality product. Below is a bid summary.

Superior Asphalt, Inc.	\$53,000.00
Rieth-Riley Construction	\$58,854.17
Blackgold Paving	\$61,858.98
A-1 Asphalt	\$66,336.66
Michigan Paving & Materials	\$68,261.52

Please see the attachment for unit cost detail.

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to award the unit price paving contract of the north haul road at South Kent Landfill to Superior Asphalt, Inc. in the amount of \$53,000.

ATTACHMENTS:

Bid and unit cost tabulation

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR: _____

Douglas A. Wood

RFQ 1034 - South Kent Paving

Date/Time Closed	Line	Description	Quantity	Unit	Name	Unit Quote	Extension
2/21/2012 10AM	1	Milling & Hauling Exist Mat.	4681	SQ YD	Superior Asphalt, Inc.	\$ 0.55	\$ 2,574.55
2/21/2012 10AM	2	2" Base Course 2C	504	TON	Superior Asphalt, Inc.	\$ 55.00	\$ 27,720.00
2/21/2012 10AM	3	1-1/2" Wear Course 4C	378	TON	Superior Asphalt, Inc.	\$ 57.00	\$ 21,546.00
2/21/2012 10AM	4	Fine Grading	1	EA	Superior Asphalt, Inc.	\$ 1,159.45	\$ 1,159.45
							\$ 53,000.00
2/21/2012 10AM	1	Milling & Hauling Exist Mat.	4681	SQ YD	Rieth-Riley Construction Co., Inc.	\$ 1.27	\$ 5,944.87
2/21/2012 10AM	2	2" Base Course 2C	504	TON	Rieth-Riley Construction Co., Inc.	\$ 54.64	\$ 27,538.56
2/21/2012 10AM	3	1-1/2" Wear Course 4C	378	TON	Rieth-Riley Construction Co., Inc.	\$ 61.33	\$ 23,182.74
2/21/2012 10AM	4	Fine Grading	1	EA	Rieth-Riley Construction Co., Inc.	\$ 2,188.00	\$ 2,188.00
							\$ 58,854.17
2/21/2012 10AM	1	Milling & Hauling Exist Mat.	4681	SQ YD	Blackgold Paving Inc.	\$ 1.08	\$ 5,055.48
2/21/2012 10AM	2	2" Base Course 2C	504	TON	Blackgold Paving Inc.	\$ 62.75	\$ 31,626.00
2/21/2012 10AM	3	1-1/2" Wear Course 4C	378	TON	Blackgold Paving Inc.	\$ 65.00	\$ 24,570.00
2/21/2012 10AM	4	Fine Grading	1	EA	Blackgold Paving Inc.	\$ 607.50	\$ 607.50
							\$ 61,858.98
2/21/2012 10AM	1	Milling & Hauling Exist Mat.	4681	SQ YD	A-1 Asphalt Inc.	\$ 1.02	\$ 4,774.62
2/21/2012 10AM	2	2" Base Course 2C	504	TON	A-1 Asphalt Inc.	\$ 65.91	\$ 33,218.64
2/21/2012 10AM	3	1-1/2" Wear Course 4C	378	TON	A-1 Asphalt Inc.	\$ 68.80	\$ 26,006.40
2/21/2012 10AM	4	Fine Grading	1	EA	A-1 Asphalt Inc.	\$ 2,337.00	\$ 2,337.00
							\$ 66,336.66
2/21/2012 10AM	1	Milling & Hauling Exist Mat.	4681	SQ YD	Michigan Paving and Materials Company	\$ 0.88	\$ 4,119.28
2/21/2012 10AM	2	2" Base Course 2C	504	TON	Michigan Paving and Materials Company	\$ 68.63	\$ 34,589.52
2/21/2012 10AM	3	1-1/2" Wear Course 4C	378	TON	Michigan Paving and Materials Company	\$ 71.99	\$ 27,212.22
2/21/2012 10AM	4	Fine Grading	1	EA	Michigan Paving and Materials Company	\$ 2,340.50	\$ 2,340.50
							\$ 68,261.52

Note: This document shall not be construed as a comment on the responsiveness and is subject to change during the review process. This information is not an indicator of award.

MEETING DATE: March 1, 2012

AGENDA ITEM#: VI – B – 3



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: South Kent Landfill Soil Borings

DIVISION: Solid Waste Operations

PREPARED BY: Ron Landis

ACTION REQUESTED:

Approval of Unit Price Contract for completion of soil borings at South Kent Landfills in cell 35 and 37.

SUMMARY OF REQUEST:

The Michigan Department of Environmental Quality requires soil borings to demonstrate that there is a minimum of 10 feet of clay beneath composite liner system for a type two landfill. To complete this effort for cells 35 and 37 staff, with assistance of the Purchasing Division, requested bids for obtaining soil samples at 20 meter intervals within cells 35 and 37. Ten bidders responded to the request. Based on our evaluation we recommend awarding the unit price contract to TriMedia Environmental & Engineering Services in the amount of \$ 15,718.20. Below is a summary of the bids.

<u>Contractor</u>	<u>Total price</u>
TriMedia Environmental & Engineering	\$ 15,718.20
MATECO	\$ 20,764.00
Soils & Structures	\$ 24,338.50
Environmental Drilling & Contracting	\$ 24,354.00
Stearns Drilling	\$ 26,914.00
Pearson Drilling Company	\$ 31,595.80
DLZ Michigan	\$ 33,250.00
PSI	\$ 36,409.00
GZA Geo Environmental	\$ 41,301.10
Enviro solutions	\$ 46,682.00

Please see attachment for unit cost detail.

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to award a unit Price Contract to TriMedia Environmental & Engineering Services to complete the installation of Soil Borings in the amount of \$15,718.20.

ATTACHMENTS:

Bid and unit cost detail

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR: _____

Douglas A. Wood

BID 1024 - SK Landfill Soil Borings

Date/Time Closed	Line	Description	Quantity	Unit	Name	Unit Quote	Extension	Comments
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	TriMedia Environmental & Engineering Services	\$ 34.80	\$ 6,472.80	
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	TriMedia Environmental & Engineering Services	\$ 34.80	\$ 5,150.40	
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	TriMedia Environmental & Engineering Services	\$ 25.30	\$ 3,795.00	
1/31/2012 10AM	4	Shelby Tube Samples (including shelby tube sampler)	4	EA	TriMedia Environmental & Engineering Services	\$ 75.00	\$ 300.00	
							\$ 15,718.20	
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	METECO Drilling Company	\$ 48.00	\$ 8,928.00	Comments
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	METECO Drilling Company	\$ 42.00	\$ 6,216.00	Comments
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	METECO Drilling Company	\$ 36.00	\$ 5,400.00	Comments
1/31/2012 10AM	4	Shelby Tube Samples (including shelby tube sampler)	4	EA	METECO Drilling Company	\$ 55.00	\$ 220.00	Comments
							\$ 20,764.00	
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	Soils & Structures, Inc.	\$ 72.00	\$ 13,392.00	
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	Soils & Structures, Inc.	\$ 39.25	\$ 5,809.00	
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	Soils & Structures, Inc.	\$ 32.25	\$ 4,837.50	
1/31/2012 10AM	4	Shelby Tube Samples (including shelby tube sampler)	4	EA	Soils & Structures, Inc.	\$ 75.00	\$ 300.00	
							\$ 24,338.50	
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	Environmental Drilling and Contracting, Inc.	\$ 61.00	\$ 11,346.00	
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	Environmental Drilling and Contracting, Inc.	\$ 46.00	\$ 6,808.00	
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	Environmental Drilling and Contracting, Inc.	\$ 40.00	\$ 6,000.00	
1/31/2012 10AM	4	Shelby Tube Samples (including shelby tube sampler)	4	EA	Environmental Drilling and Contracting, Inc.	\$ 50.00	\$ 200.00	
							\$ 24,354.00	
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	Stearns Drilling	\$ 69.00	\$ 12,834.00	Attachment
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	Stearns Drilling	\$ 53.00	\$ 7,844.00	Attachment
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	Stearns Drilling	\$ 40.00	\$ 6,000.00	Attachment
1/31/2012 10AM	4	Shelby Tube Samples (including shelby tube sampler)	4	EA	Stearns Drilling	\$ 59.00	\$ 236.00	Attachment
							\$ 26,914.00	
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	Pearson Drilling Company	\$ 74.52	\$ 13,860.72	Comments
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	Pearson Drilling Company	\$ 61.96	\$ 9,170.08	Comments
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	Pearson Drilling Company	\$ 55.50	\$ 8,325.00	Comments
1/31/2012 10AM	4	Shelby Tube Samples (including shelby tube sampler)	4	EA	Pearson Drilling Company	\$ 60.00	\$ 240.00	Comments
							\$ 31,595.80	
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	DLZ Michigan	\$ 85.00	\$ 15,810.00	Comments
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	DLZ Michigan	\$ 65.00	\$ 9,620.00	Comments
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	DLZ Michigan	\$ 50.00	\$ 7,500.00	Comments
1/31/2012 10AM	4	Shelby Tube Samples (including shelby tube sampler)	4	EA	DLZ Michigan	\$ 80.00	\$ 320.00	Comments
							\$ 33,250.00	

Note: This document shall not be construed as a comment on the responsiveness and is subject to change during the review process. This information is not an indicator of award.

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BID 1024 - SK Landfill Soil Borings

1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	PSI	NO	
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	PSI	LINES	
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	PSI	PRICED	
1/31/2012 10AM	4	Shelby Tube Samples (including shelly tube sampler)	4	EA	PSI	OUT	
							\$ 36,709.00
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	GZA GeoEnvironmental, Inc.	\$ 85.66	\$ 15,932.76
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	GZA GeoEnvironmental, Inc.	\$ 84.58	\$ 12,517.84
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	GZA GeoEnvironmental, Inc.	\$ 83.51	\$ 12,526.50
1/31/2012 10AM	4	Shelby Tube Samples (including shelly tube sampler)	4	EA	GZA GeoEnvironmental, Inc.	\$ 81.00	\$ 324.00
							\$ 41,301.10
1/31/2012 10AM	1	Soil Borings (continuous sampling)	186	MTR	EnviroSolutions, Inc.	\$ 96.00	\$ 17,856.00
1/31/2012 10AM	2	Soil Borings (sampling at 5' interval)	148	MTR	EnviroSolutions, Inc.	\$ 96.00	\$ 14,208.00
1/31/2012 10AM	3	Soil Borings (no sampling)	150	MTR	EnviroSolutions, Inc.	\$ 96.00	\$ 14,400.00
1/31/2012 10AM	4	Shelby Tube Samples (including shelly tube sampler)	4	EA	EnviroSolutions, Inc.	\$ 54.50	\$ 218.00
							\$ 46,682.00

Note: This document shall not be construed as a comment on the responsiveness and is subject to change during the review process. This information is not an indicator of award.

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MEETING DATE: **March 1, 2012**

AGENDA ITEM#: VI – C – 1



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: Kentwood Landfill Replacement Well

DIVISION: Solid Waste

PREPARED BY: Ron Landis

ACTION REQUESTED:

Review and approval of selecting Environmental Drilling and Contracting to replace Extraction Well #5 (EW 5) at the Kentwood Landfill.

SUMMARY OF REQUEST:

Staff Requested quotes from qualified companies for the replacement of Extraction Well #5 (EW 5). To replace the well it requires drilling through approximately 30 feet of in-place waste and installation of a doubled cased extraction well approximately 70 feet deep. Based on the quotation received, staff is recommending Environmental Drilling and Contracting, Inc. (EDAC) in the amount of \$18,672. EDAC has completed similar work at Kentwood in the past with excellent results.

Below is a summary of the quotations:

Environmental Drilling and Contracting	\$ 18, 672
Stearns Drilling	\$ 19,892
MATECO	\$ 20,259

Unit cost is detailed in the attachment

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to authorize Environmental Drilling and Contracting, Inc. to install extraction Well 5 at Kentwood Landfill in the amount of \$18,672.

ATTACHMENTS:

Environmental Drilling and Contracting bid and unit cost breakdown

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR: _____

Douglas A. Wood

EDAC

Environmental Drilling and Contracting Inc.

4692 136th Avenue, Holland, MI 49424 (616)738-9300, FAX (616)738-8135

February 17, 2012

Ms. Molly Sherwood
Kent County Fiscal Services
County Administration Building
300 Monroe Avenue NW
Grand Rapids, MI 49503

Re: Kentwood Landfill Site
Grand Rapids, MI
Cost Proposal

Dear Ms. Sherwood:

Per your request and specifications, EDAC is pleased to quote as follows:

Scope of Work:

1 Each, Pilot Soil Boring, 70' depth, continuous split spoon sampling 30-70', abandon w/ cuttings 70-30' & bentonite grout 0-30'. Transport cuttings to onsite roll-off container.

1 Each, EW-5 Replacement Well, 70' depth, 10" steel double casing to 30', drill 9" dia thru 10" 30-70'. Set well w/ 50' 4" sch80 PVC riser, 4"x20' SS screen & 4" x5' sch80 PVC sump.

1 Each, EW-5 Companion Well, 30' depth, drill w/ 12 1/4" hollow stem augers & set well w/ 20' 4" sch80 PVC riser, 4"x15' SS screen & 4" x5' sch80 PVC sump.

Alternate Proposal:

Cost to complete replacement well EW-5 & EW-5 shallow companion well with 6" dia screens, risers & sumps.

- NOTES: 1. Drill Rig: Gus Pech GP 1100 ATV
2. Cuttings: contain & transport to onsite rolloff container
Development & decon water: contain & transport to onsite treatment plant
4. Duration: 5-6 days w/ 2 mob/demob

Description	Estimated Quantity	Unit Price	Total Cost
Mobilization/Demobilization	--	Lump Sum	\$1,500.00
Drilling w/4 1/4" H.S.A. 0-50'	50 Feet	\$ 8.00/ft	\$ 400.00
50-100'	20 Feet	\$ 12.00/ft	\$ 240.00
Drilling w/12 1/4" H.S.A. 0-50'	60 Feet	\$ 30.00/ft	\$1,800.00
Drilling w/9" rotary 0-100'	40 Feet	\$ 15.00/ft	\$ 600.00
Split spoon sampling, 2" x 24" 0-50'	10 Each	\$ 12.00/ea	\$ 120.00
50-100'	10 Each	\$ 15.00/ea	\$ 150.00
Well Construction /abandonment	9 Hours	\$ 130.00/hr	\$1,170.00
Casing 10" steel	30 Feet	\$ 40.00/ft	\$1,200.00
Screen 4" x 20' SS	1 Each	\$1350.00/ea	\$1,350.00
Screen 4" x 15' SS	1 Each	\$1060.00/ea	\$1,060.00
Casing 4"x10' PVC sch80	7 Each	\$ 130.00/ft	\$ 910.00
Sump 4"x5' PVC sch80	2 Each	\$ 100.00/ft	\$ 200.00
Filter	92 Each	\$ 9.00/ea	\$ 828.00
Bentonite Grout	10 Each	\$ 23.00/ea	\$ 230.00
Bentonite Chips	4 Each	\$ 13.00/ea	\$ 52.00
Cement: set 10" casing	25 Each	\$ 12.00/ea	\$ 300.00
Decon, access, setup, haul water & site cleanup	15 Hours	\$ 110.00/hr	\$1,650.00
Steam Cleaner/Generator	5 Days	\$ 80.00/dy	\$ 400.00
Development	6 Hours	\$ 130.00/hr	\$ 780.00
Development Pump	1 Day	\$ 150.00/day	\$ 150.00

Travel Expenses per 2 man crew
 Transport cuttings & water onsite
ESTIMATED TOTAL:

5 Days \$ 50.00/dy \$ 250.00
 6 Hours \$140.00/hr \$ 840.00
\$16,180.00

Alternate Proposal:

Cost to complete replacement well EW-5 & EW-5 shallow companion well with 6" dia screens, risers & sumps

Mobilization/Demobilization

Drilling w/4 1/4" H.S.A. 0-50'

50-100'

Drilling w/12 1/4" H.S.A. 0-50'

Drilling w/9" rotary 0-100'

Split spoon sampling, 2" x 24"

0-50'

50-100'

Well Construction /abandonment

Casing 10" steel

Screen 6" x 20' SS

Screen 6" x 15' SS

Casing 6"x10' PVC sch80

Sump 6"x5' PVC sch80

Filter

Bentonite Grout

Bentonite Chips

Cement: set 10" casing

Decon, access, setup, haul water & site cleanup

Steam Cleaner/Generator

Development

Development Pump

Standby Time

Travel Expenses per 2 man crew

Transport cuttings & water onsite

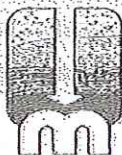
ESTIMATED TOTAL:

--	Lump Sum	\$1,500.00
50 Feet	\$ 8.00/ft	\$ 400.00
20 Feet	\$ 12.00/ft	\$ 240.00
60 Feet	\$ 30.00/ft	\$1,800.00
40 Feet	\$ 15.00/ft	\$ 600.00
10 Each	\$ 12.00/ea	\$ 120.00
10 Each	\$ 15.00/ea	\$ 150.00
9 Hours	\$ 130.00/hr	\$1,170.00
30 Feet	\$ 40.00/ft	\$1,200.00
1 Each	\$2000.00/ea	\$2,000.00
1 Each	\$1600.00/ea	\$1,600.00
7 Each	\$ 300.00/ft	\$2,100.00
2 Each	\$ 210.00/ft	\$ 420.00
80 Each	\$ 9.00/ea	\$ 720.00
10 Each	\$ 23.00/ea	\$ 230.00
4 Each	\$ 13.00/ea	\$ 52.00
25 Each	\$ 12.00/ea	\$ 300.00
15 Hours	\$ 110.00/hr	\$1,650.00
5 Days	\$ 80.00/dy	\$ 400.00
6 Hours	\$ 130.00/hr	\$ 780.00
1 Day	\$ 150.00/dy	\$ 150.00
0 Hours	\$ 145.00/hr	\$ 0.00
5 Days	\$ 50.00/dy	\$ 250.00
6 Hours	\$140.00/hr	\$ 840.00
		\$18,672.00

The number of units described above are estimates only and may be adjusted based on actual quantities. Trusting the above meets your approval, please contact this office with any questions.

Sincerely,

Kirk Johnson
 President



MATECO

Hollow Stem Auger, Rotary, Direct Push & Seismic - Since 1971.

MATECO Drilling Company

Corporate Office: 683 Plymouth Hwy, Grand Rapids, MI 49508
616.489.9200, FAX: 616.489.6784
Operations Office: 271 Rockford Park Drive, Rockford, MI 49341
800.848.3478, 616.863.4350, FAX: 616.863.4379

Proposal 8819-0212-6" wells
February 16, 2012

To: Molly Sherwood
Environmental Compliance Manager
Department of Public Works
Kent County, MI

submitted via email
phone: 616 336 4365
email: Molly.Sherwood@kentcountymil.gov

Project: Installation of an Extraction Well at the Kentwood Landfill in Kentwood, MI.

Scope of Work:

(2) Mobilizations of ATV drill rig & 2 man crew to site.

Pilot Boring

(1) pilot boring using 4.25" ID auger to a depth of approximately 70'. Boring will be advanced through approximately 30' of waste material and 40' of native material that lies underneath. Boring will be continuously split spoon sampled from 30' to 70'. Waste cuttings will be transported to onsite rolloff container. Boring will be backfilled from 30' to 70' with soil cuttings, & from 30' to surface with bentonite grout. Extra soil cuttings to clients roll-off dumpster.

Extraction Well Installations (offset from pilot boring)

Set (1) 10" diameter steel casing to 30' using 12.25" ID auger, through waste layer into native soil. Allow casing to set overnight.

Rotary drill a 9-7/8 inch diameter borehole to 70' install 6" SCH 80 PVC riser, 20' of 6" ss screen with a 5' SCH 80 PVC sump, sand pack, bentonite seal, bentonite grout to surface, extend well 2.5' above ground surface, provide 6" PVC slip cap, develop well.

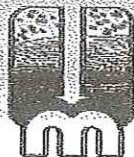
(1) boring 30' deep using 12.25" ID auger through waste

install 6" SCH 80 PVC riser, 15' of 6" ss screen with a 5' SCH 80 PVC sump, sand pack, bentonite seal, bentonite grout to surface, extend well 2.5' above ground surface, provide 6" PVC slip cap, develop well.

Soil cuttings to clients roll-off dumpster, water to clients onsite treatment plant floor drain.

Pilot Boring

Drilling Services		Unit	Quantity	Unit Price	Total
Mobilization/Demobilization		L.S.	1	\$600.00	\$600.00
Drill with 4-1/4" ID auger 0-70'		L.F.	70	\$14.00	\$980.00
2" OD spiltspoon sampling		Ea.	20	\$18.00	\$360.00
Close boring		L.F.	70	\$9.00	\$630.00
Onsite setup, decon, water haul, move cuttings, standby for methane		Hr.	4	\$185.00	\$740.00
Sieve analysis		Ea.	3	\$65.00	\$195.00
Sub-Total Drilling Services					\$3,505.00
Expenses		Unit	Quantity	Unit Price	Total
Decontamination equipment		Day	2	\$110.00	\$220.00
Loader		Day	2	\$135.00	\$270.00
Sub-Total Expenses					\$490.00
Materials		Unit	Quantity	Unit Price	Total
Bentonite- grout (Quick Grout)		Bag	6	\$18.00	\$108.00
Sub-Total Materials					\$108.00
Total Estimate Value					\$4,103.00



MATECO

Molly Sherwood
Proposal #8819-0212
Page 2

Extraction Wells

Drilling Services		Unit	Quantity	Unit Price	Total
Mobilization/Demobilization		L.S.	1	\$600.00	\$600.00
Drill w/ 12-1/4" ID HSA 0-50'		L.F.	60	\$22.00	\$1,320.00
Rotary drill beyond the 10" casing		L.F.	40	\$28.00	\$1,120.00
2" OD splitters w/out liners		Ea.	0	\$18.75	\$0.00
Install and grout 10" steel casing		L.F.	30	\$19.00	\$570.00
Well construction		L.F.	100	\$7.90	\$790.00
Onsite setup, decon, water haul, move cuttings, well development standby for methane		Hr.	16	\$170.00	\$2,720.00
Sub-Total Drilling Services					\$7,120.00
Expenses		Unit	Quantity	Unit Price	Total
Decontamination equipment		Day	5	\$110.00	\$550.00
Loader		Day	5	\$135.00	\$675.00
Sub-Total Expenses					\$1,225.00
Materials		Unit	Quantity	Unit Price	Total
6" x 20' stainless steel screen		Ea.	1	\$1,850.00	\$1,850.00
6" x 15' stainless steel screen		Ea.	1	\$1,100.00	\$1,100.00
6" x 5' SCH 80 PVC riser (sump)		Ea.	2	\$170.00	\$340.00
6" x 10' SCH 80 PVC riser		Ea.	7	\$210.00	\$1,470.00
10" black steel casing		L.F.	30	\$65.00	\$1,950.00
Sand pack		Bag	50	\$10.00	\$500.00
Bentonite- grout (Quick Grout)		Bag	16	\$18.00	\$288.00
Bentonite-chips (Hole Plug)		Bag	6	\$12.50	\$75.00
Cement bentonite-grout		Bag	12	\$14.00	\$168.00
6" PVC slip cap		Ea.	2	\$35.00	\$70.00
Sub-Total Materials					\$7,811.00
Total Estimate Value					\$16,156.00

Our Risk Work Policy:

There are some projects where MATECO and/or our client are not able to assess the difficulty and or risks of equipment damage or loss while in the field because the lithology or site access is not well understood or is understood to be potentially difficult. With this proposal is the understanding by our client that MATECO may mobilize to the site and be unable to attain the desired project scope. Client understands that the above unit rates will be billed for all completed tasks plus mobilization if difficult drilling or difficult access are encountered. In situations where the desired scope is obtainable but MATECO feels the risk of equipment damage or loss is beyond typical losses, the client will be given the opportunity to approve reimbursement of lost or damaged equipment and MATECO will gladly continue the work if we feel it is safe. Client agrees that MATECO will be the ultimate judge of when this occurs and what point this policy goes into effect. Cost of third party services will be at cost plus 10%.

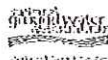
For more information about our company, qualifications and capabilities please visit our web site at www.mateco.com. We look forward to working with you soon on this important project.

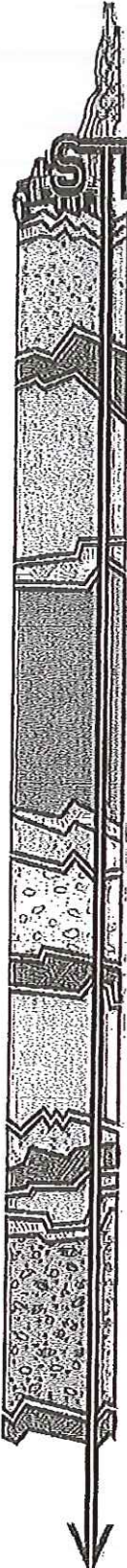
Sincerely,
MATECO Drilling Company
Dale R. Elliott
President

Contact Information Regarding this Proposal

Dale R. Elliott
(616) 863-6890 ext.22
delliott@matecodrilling.com

Todd Johansen
(616) 863-6890 ext.21
tjohansen@matecodrilling.com





STEARNS DRILLING

February 20, 2012

Ms. Molly Sherwood
Kent County Department of Public Works
Earl G. Woodworth Building
1500 Scribner Avenue, NW
Grand Rapids, MI 49504

QUOTE NO.:
24191

Re: **COST ESTIMATE FOR DRILLING SERVICES AT THE KENTWOOD LANDFILL SITE 4920 WALMA AVENUE IN KENTWOOD, MICHIGAN**

Dear Ms. Sherwood:

We are pleased to provide a cost estimate for drilling services at the above referenced project.

WORK SCOPE

Pilot Soil Boring:

1. Drill 1 pilot soil boring to 70 feet:
 - Drill through the refuse (estimated to 30 feet) using 7.6, 6 and 4-inch diameter sonic tooling;
 - Collect soil samples continuously;
 - Leaving the largest sonic casing at 30 feet to act as a temporary casing, drill through to total depth using 4 and 6-inch sonic tooling;
 - Collect soil samples continuously;
 - Conduct sieve analyses on 2 soil samples;
 - Backfill with native soil from about 70 to 30 feet (the potential screen zone for the EW-5 replacement well) and with bentonite grout from 30 feet to surface;
 - Use the sieve analyses to recommend filter pack and screen slot sizing for the EW-5 replacement well.

EW-5 Replacement Well & Companion Well:

2. Drill and construct 1, 4-inch diameter well (EW-5 replacement well) to 70 feet:
 - At the pilot hole location completed earlier, drill through the refuse (estimated to 30 feet) using 12 1/4-inch hollow stem augers;
 - Collect 0 split-spoon soil samples;
 - Construct and install a 10-inch black-steel casing to 30 feet and place cement grout;
 - After the grout sets, drill through using 9 7/8-inch mud rotary methods to 70 feet;
 - Construct and install a 4-inch well to total depth using PVC casing, a 20-foot long, stainless-steel well screen with a 5-foot long PVC sump on the bottom;
 - Place sand pack, bentonite seal, and bentonite grout;
 - Allow the casing to extend above grade with a compression seal cap (No protective well cover or concrete pad;
 - Develop the well.

6974 Hammond SE, Dutton, MI 49316-9116, Phone: (616) 698-7770, Fax: (616) 698-9886

3. Drill and construct 1, 4-inch diameter well (companion well) to 30 feet:
 - Drill to total depth using 4 1/4-inch hollow stem augers;
 - Collect split-spoon soil samples at 5-foot intervals;
 - Ream drill to total depth using 6 1/4-inch hollow stem augers;
 - Construct and install a 4-inch well to total depth using PVC casing and 15 feet of stainless-steel well screen with a 5-foot long PVC sump at the bottom;
 - Place sand pack, bentonite seal, and bentonite grout;
 - Allow the casing to extend above grade with a compression seal cap (No protective well cover or concrete pad);
 - Develop the well.

Alternate - EW-5 Replacement Well & Companion Well:

2. Drill and construct 1, 6-inch diameter well (EW-5 replacement well) to 70 feet:
 - At the pilot hole location completed earlier, drill through the refuse (estimated to 30 feet) using 12 1/4-inch hollow stem augers;
 - Collect 0 split-spoon soil samples;
 - Construct and install a 10-inch black-steel casing to 30 feet and place cement grout;
 - After the grout sets, drill through using 9 7/8-inch mud rotary methods to 70 feet;
 - Construct and install a 6-inch well to total depth using PVC casing, a 20-foot long, stainless-steel well screen with a 5-foot long PVC sump on the bottom;
 - Place sand pack, bentonite seal, and bentonite grout;
 - Allow the casing to extend above grade with a compression seal cap (No protective well cover or concrete pad);
 - Develop the well.
3. Drill and construct 1, 6-inch diameter well (companion well) to 30 feet:
 - Drill to total depth using 4 1/4-inch hollow stem augers;
 - Collect split-spoon soil samples at 5-foot intervals;
 - Ream drill to total depth using 8 1/4-inch hollow stem augers;
 - Construct and install a 6-inch well to total depth using PVC casing and 15 feet of stainless-steel well screen with a 5-foot long PVC sump at the bottom;
 - Place sand pack, bentonite seal, and bentonite grout;
 - Allow the casing to extend above grade with a compression seal cap (No protective well cover or concrete pad);
 - Develop the well.

ESTIMATE ASSUMPTIONS:

Decontamination procedure is high pressure steam.

Contract language will be acceptable to Stearns Drilling.

Level D safety is required.

Client to provide a Health & Safety plan for Stearns to adopt.

Client to coordinate utility clearance with the State one-call system and the site owner.

Client to provide a usable water source.

Contain waste soil and transport it to a client-provided roll-off box.

Contain waste water and transport it to an existing on-site treatment unit.

Surface material consists of soil.

An ATV rig is required.

Stearns Drilling offers environmental, geotechnical, geothermal, Geoprobe, sonic, water supply drilling and trenching services.

6974 Hammond SE, Dutton, MI 49316-9116, Phone: (616) 698-7770, Fax: (616) 698-9886

STEARNS DRILLING COMPANY

Alternate - EW-5 Replacement Well & Companion Well:

DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSION	TOTAL
1. MOBILIZATION/DEMOBILIZATION/ PREPARATION - Drill crew	1.0	Trip(s)	\$200.00	\$200.00	\$200.00
2. MOBILIZATION/DEMOBILIZATION/ PREPARATION - Hoist crew for development	1.0	Trip(s)	\$80.00	\$80.00	\$80.00
3. DRILLING SERVICES					
a. 4 1/4" H.S.A. soil drilling (0'-25')	25.0	Feet	10.00	250.00	
4 1/4" H.S.A. soil drilling (25'-50')	5.0	Feet	11.00	55.00	
b. 8 1/4" H.S.A. soil drilling (0'-25')	25.0	Feet	14.00	350.00	
8 1/4" H.S.A. soil drilling (25'-50')	5.0	Feet	16.00	80.00	
c. 12 1/4" H.S.A. soil drilling (0'-25')	25.0	Feet	20.00	500.00	
12 1/4" H.S.A. soil drilling (25'-50')	5.0	Feet	23.00	115.00	
d. ~9 7/8-inch mud rotary soil drilling	40.0	Feet	20.00	800.00	
e. 2" Split-spoon sampling (0'-25')	5.0	Each	22.00	110.00	
2" Split-spoon sampling (25'-50')	1.0	Each	32.00	32.00	
f. Access, decontamination, clean up, haul water, drum handling and miscellaneous	9.0	Hour(s)	150.00	1,350.00	
g. Standby	0.0	Hour(s)	150.00	0.00	
h. Development	6.0	Hour(s)	150.00	900.00	
i. Well installation/boring abandonment	5.0	Hour(s)	150.00	750.00	
j. Computerized driller's logs, if desired. There's no charge for copies of handwritten logs.	0.0	Log(s)	45.00	0.00	5,292.00
4. MATERIALS					
a. Screen - 6" x 5' stainless steel	1.0	Each	640.00	640.00	
b. Screen - 6" x 10' stainless steel	3.0	Each	990.00	2,970.00	
c. Casing - 6" schedule 40 PVC	71.0	Feet	16.00	1,136.00	
d. Bottom Cap - 6" schedule 40 PVC	2.0	Each	61.00	122.00	
e. Casing - 10" black steel	30.0	Feet	51.00	1,530.00	
f. Sand pack	54.0	Bag(s)	8.00	432.00	
g. Bentonite chips or granular	2.0	Bag(s)	12.00	24.00	
h. Bentonite - grout	6.0	Bag(s)	17.00	102.00	
i. Cement grout	22.0	Bag(s)	13.00	286.00	
j. Bentonite - powdered	11.0	Bag(s)	10.00	110.00	
k. Protective casing well cover (6"x 5')	0.0	Each	180.00	0.00	
l. 6" compression seal cap	2.0	Each	57.00	114.00	
m. Padlock	0.0	Each	16.00	0.00	
n. Redi-mix concrete	0.0	Bag(s)	6.00	0.00	
o. Drum (55-gallon D.O.T.) - for soil	0.0	Each	37.00	0.00	
p. Drum (55-gallon D.O.T.) - for water	0.0	Each	37.00	0.00	
q. Bumper post (4" diameter x 6' 8" long)	0.0	Each	91.00	0.00	
r. Plastic (12' x 100' roll, 6 mil)	0.0	Roll(s)	71.00	0.00	
s. Topsoil	0.0	Bag(s)	5.00	0.00	
t. Grass seed	0.0	Pound(s)	3.00	0.00	
u. Poly tubing for 2" submersible pump	0.0	Feet	0.40	0.00	
v. Sample jar	0.0	Each	1.00	0.00	7,466.00

STEARNS DRILLING COMPANY

Alternate - EW-5 Replacement Well & Companion Well:

DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSION	TOTAL
5. EXPENSES					
a. Support truck	4.0	Day(s)	70.00	280.00	
b. Steam cleaner	4.0	Day(s)	50.00	200.00	
c. Skid steer loader or backhoe	4.0	Day(s)	150.00	600.00	
d. Cutting torch / welder / cut off saw	1.0	Lump Sum	80.00	80.00	
e. Winterizing charge (Dec. thru Feb.)	0.0	Day(s)	10.00	0.00	
f. 2", 12-volt submersible pump assembly	0.0	Lump Sum	156.00	0.00	
g. Air compressor - 185 cfm at 100 psi & fuel	1.0	Day(s)	195.00	195.00	
h. Development tooling - surge block	1.0	Lump Sum	200.00	200.00	
i. Daily travel expense	9.0	Man Day(s)	40.00	360.00	
j. Level "D" protection	9.0	Man Day(s)	10.00	90.00	2,005.00

Total Estimate for Alternate - EW-5 Replacement Well & Companion Well: \$15,043.00

Estimate Summary:

Total Estimate for Pilot Soil Boring:	\$4,849.00
Total Estimate for Alternate - EW-5 Replacement Well & Companion Well:	<u>\$15,043.00</u>
Estimate Total:	\$19,892.00

This estimate is valid for 60 days.

TERMS: Actual invoice will be based on final times and quantities spent. Balance due within thirty (30) days of invoice.
1.5 percent interest (equal to 18% annually) charged on all overdue invoices.

These unit prices are based on drilling in soils. They do not include drilling through hard clay (blow counts greater than 50 blows per 6 inches), cobbles, boulders, coarse gravels, bedrock, rubble or landfill material.

Please remember that cold weather causes actual quantities to increase over estimated quantities.

To requisition our services, please execute this agreement and return a copy to our office.

Accepted by: _____

Date: _____

Title: _____

Project start up date: _____

MEETING DATE: **March 1, 2012**

AGENDA ITEM#: VII – A



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: Extension of Household Battery Recycling and Disposal Contract

DIVISION: Waste-to-Energy

PREPARED BY: Bill Allen, Waste-to-Energy Division Director

ACTION REQUESTED:

Authorization to extend a Household Battery Recycling and Disposal Contract with Batteries Unlimited through April 30, 2015.

SUMMARY OF REQUEST:

In 2009 Department and Purchasing staff bid a three-year contract for the recycling/disposal of household batteries. This program is funded under the WTE Budget with the purpose of keeping heavy metals (mercury, cadmium, lead, lithium, nickel, zinc, etc.) out of the Facility. Seven responses were received and the Board awarded a Contract (No. WTE09-03) to Batteries Unlimited at zero cost to the County. The existing Contract runs through April 30, 2012. Batteries Unlimited (owned by Orchard Energy Solutions LLC of Holland, Michigan) has offered in writing to extend the Contract. We have received good service from this vendor and are requesting, with the concurrence of Purchasing, that the Board extend the term of the Contract for another 3 years.

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to extend the term of the Household Battery Collection and Disposal Contract (No. WTE09-03) with Batteries Unlimited through April 30, 2015 and to authorize the Director to execute a Contract Amendment for this purpose.

ATTACHMENTS:

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR: _____

Douglas L. Wood

MEETING DATE: **April 7, 2011**

AGENDA ITEM#: VIII – A



**BOARD OF
PUBLIC WORKS
ACTION REQUEST**

SUBJECT: Solid Waste Conference Approval

DIVISION: Solid Waste

PREPARED BY: Ron Landis

ACTION REQUESTED:

Approval for two staff to attend the 22nd Annual Solid Waste Conference hosted by the Engineering Society of Detroit.

SUMMARY OF REQUEST:

The Engineering Society of Detroit is hosting a two-day solid waste conference on March 27 and 28, 2012 in East Lansing Michigan. The training session and conference will focus on issues related to policy, new technologies, regulatory updates and the future of the solid waste industry. Please see attached information. The government rate for this conference is \$180 per person for a total of \$360.

SUGGESTED MOTION:

It was moved by _____ and seconded by _____ to approve two staff attending the 22nd Annual Engineering Society of Detroit's Solid Waste Technical Conference at a cost of \$360.

ATTACHMENTS:

Travel Request
Conference Agenda

GOVERNING/ADVISORY BOARD APPROVAL DATE March 1, 2012

DEPARTMENT DIRECTOR:

Douglas A. Wood



THE ENGINEERING SOCIETY OF DETROIT®
FOUNDED IN 1895

20700 Civic Center, Ste 450
Southfield, MI 48076

NONPROFIT
ORGANIZATION
U.S. POSTAGE PAID
DETROIT, MI
PERMIT #3217

THE ENGINEERING SOCIETY OF DETROIT / MICHIGAN WASTE INDUSTRIES ASSOCIATION

SOLID WASTE

22nd Annual Solid Waste Technical Conference

ARTWORK BY DAWN SGRICCIA



TRAINING DAY: TUESDAY, MARCH 27, 2012

CONFERENCE DAY: WEDNESDAY, MARCH 28, 2012

FEATURING: JOE BENCO, VICE PRESIDENT
ENGINEERING AND ENVIRONMENTAL MANAGEMENT,
REPUBLIC SERVICES

TOPIC: TECHNICAL CHALLENGES AND INNOVATIONS
AT REPUBLIC SERVICES

**KELLOGG HOTEL & CONFERENCE CENTER
EAST LANSING, MICHIGAN**

For 22 years, the Engineering Society of Detroit (ESD), in partnership with the Michigan Waste Industries Association, has hosted this annual conference, focusing on cutting-edge technological innovations and solutions related to the solid waste industry.

This year will be no exception. New topics and expert presenters will make this conference the must attend event of 2012.

In addition to the keynote presentation, the conference will feature experts in climate change, alternative energy, and leading edge waste management practices to help attendees learn about issues related

to policy, new technologies, regulatory update and the future of the solid waste industry.

A pre-conference training session, designed to provide practical guidance on landfill technological issues will take place on Tuesday, March 27, 2012. Relevant issues will be related to landfill technologies, operational best practices, environmental concerns and geotechnical aspects of landfill design.

Training will be led by representatives of the regulated community, regulatory agencies, engineers and policy makers to ensure a broad perspective of the issues impacting solid waste management practices.

• **PRE-CONFERENCE TRAINING DAY:**

Training Day Agenda

Landfill Technology Issues

Tuesday, March 27, 2012

Kellogg Hotel & Conference Center, East Lansing, MI

7:30 a.m.	Registration & Continental Breakfast
8:00 a.m. – 12:00 p.m.	Training Program
12:00 p.m. – 1:00 p.m.	Lunch
1:00 p.m. – 5:00 p.m.	Training Program

*Refreshments will be served in the training room.

TOPICS

NEW DEVELOPMENTS IN LINER INTEGRITY TESTING

FOR GLEOSYNTHETIC/GEOMEMBRANE BARRIER SYSTEMS

Jimmy Youngblood, Technical Support Manager, GSE Lining Technology LLC

It has been well established that the vast majority of damage to geosynthetic barriers is a consequence of the installation processes and particularly cover soil placement. One of the ways the industry has addressed this is the repair of damage identified using post installation liner integrity surveys such as electrical leak location (ELL) surveys. GSE has developed new material formulations and compositions that help to improve the performance, speed and accuracy of all methods of liner integrity surveys including ELL. This presentation will include a description of the investigations of the comparative performance and application of conductive geomembrane versus traditional liner in these ELL surveys. "Advancements in Geosynthetics Drainage Product Development"

NEW DEVELOPMENTS IN LANDFILL GAS MANAGEMENT EQUIPMENT

Daniel DeArment, PE, Vice President LFG Specialties, LLC

This session provides a brief overview of six new technologies or refinements of old technologies currently being developed by LFG Specialties for the landfill gas industry. These include (1) Leachate Evaporation utilizing waste heat generated from reciprocating engines, (2) Low Emission Flares utilizing nozzle mix technology, (3) 24 volt control panels to ease compliance with NFPA 70E regulations, (4) Remote access of control panels and data recorders via the internet, (5&6) Improved turndown ratios for candlestick and enclosed flares to better support LFGTE projects.

A NOVEL INTEGRATED FARM-BASED BIOREFINING ON AGRICULTURAL WASTES FOR VALUE-ADDED FUELS/CHEMICAL PRODUCTION

Wei Liao, PhD, PE, Department of Biosystems & Agricultural Engineering, Michigan State University

Anaerobic digestion (AD) and algal cultivation are existing, natural, biological conversion processes that have been proven effective at converting organic residues into various energy/chemical products including methane biogas, starch, and proteins. These processes also help relieve many of the environmental concerns associated with agricultural wastes, such as odor, greenhouse gas emissions, and protection of soil and water quality. Considering both the improvement of bioenergy production and the environmental benefits realized from the treatment of agricultural wastes, this research developed a novel integrated farm-based biorefining concept on a combined feedstock of animal manure and other crop residues to produce ethanol, methane, and other value-added products.

POWER FROM THE CAP – AN ALTERNATIVE LANDFILL CLOSURE SYSTEM

Arthur Mohr Jr, Director, Landfill Solutions, Carlisle Energy Services, Inc.

Exposed Geomembrane Covers (EGC) have been used as an alternative, long-term closure system, providing odor control, gas entrapment, elimination of soil erosion and predictable storm water management benefits, as well as a viable platform for flexible solar photovoltaics that are integrated to the geomembrane.

Learn about Carlisle Energy's willmost recent installations, including design considerations and financial details that will be of interest to attendees of this seminar.

ADVANCEMENTS IN GEOSYNTHETICS DRAINAGE PRODUCT DEVELOPMENT

Jimmy Youngblood, Technical Support Manager, GSE Lining Technology LLC

Learn about the innovative biplanar geonets and geocomposites. The presentation will also cover the new GSE Coal Ash Drain geocomposite with advantageous drainage and filtration functions in containment applications for coal combustion by-products (CCPs), including fly ashes and FGD gypsums which could have silt-type fine contents up to over 99%.

CLOSURE TURF

Don DiGuilio, Northeast Marketing Manager, Agru America, Inc.

Find out how ClosureTurf can work for you. This impermeable synthetic grass for economical and environmentally sound closure of landfills, mine spoils and hazardous sites, can dramatically reduce construction and long term maintenance costs, while providing improved stability, erosion protection, emission control and leachate reduction. It combines a drainage system and geomembrane barrier with durable synthetic turf for a long life of superior performance and aesthetics.

All training day programs will be eligible for Continuing Education Credits based on eight hours of instruction time. A continental breakfast, lunch, breaks and course materials are included in the training day price. Overnight hotel rooms are available as part of the conference block and reservations must be made directly with the Kellogg Hotel & Conference Center.

Members of ESD and MWIA can take advantage of a member rate discount.

If you are not currently a member of ESD, you may join at the time of registration to receive the discount.

COURSE FEES

Member: \$225.00

Non-Member: \$300.00

**Register on the
back page or online at
www.esd.org.**

Conference Day Agenda

Wednesday, March 28, 2012 | Kellogg Hotel & Conference Center, East Lansing, MI

TIME	SPEAKER	SESSION TITLE
8:15AM - 8:30AM	Paul Sgriccia, PE, U.S. Waste Market Sector Leader, Golder Associates Inc.	Welcome
8:30AM - 9:30AM	Bruce Parker, Esq., President & CEO, Environmental Industry Association	The Solid Waste Industry: Present and Future
9:30AM - 10:30AM	George R. Koerner, Ph.D., P.E. & CQA, Director, Geosynthetic Institute (GSI)	Landfilling Coal Combustion Residuals
10:30AM - 11:00AM	BREAK	
11:00AM - 12:00PM	Steven Smith, P.E., Vice President - Construction and Operations, Clean Energy Renewable Fuels	LFG to High Btu Gas - What's so Difficult?
12:00PM - 1:00PM	Joe Benco, Vice President Engineering and Environmental Management, Republic Services	Technical Challenges and Innovations at Republic Services
TRACK A		
1:30PM - 2:05PM	Margie Ring, State Solid Waste Engineering Coordinator, MDEQ	MDEQ Current Issues / Regulatory Update
	Duane Roskoskey, Environmental Quality Specialist, MDEQ	
	Rex Lane, Senior Environmental Quality Analyst, MDEQ	
2:05PM - 2:40PM	Susan Lynn Johnson, J.D., Shareholder, Butzel Long	Implications of EPA's Proposed New RCRA Definition of Solid Waste
2:45PM - 3:20PM	Kari Saganski, Technical Services Director, Synagro Technologies and President of Michigan Water Environment Association	Hot Topic Regulatory Issues in Wastewater
3:25PM - 4:00PM	Xianda Zhao, Ph.D., P.E., CTI and Associates, Inc.,	Jump Start Methane Production In A Bioreactor Landfill Using Septage
	Matt Williams, Manager, St. Clair County Landfill	
TRACK B		
1:30PM - 2:05PM	Patric Stanford, Rochem Membrane Systems, Inc	Reverse Osmosis-Based Leachate Treatment System at Orchard Hill Sanitary Landfill - Highlights from Permitting, Start-up and Operation
2:05PM - 2:40PM	Doug Le Do, Senior Project Manager, GZA GeoEnvironmental, Inc	New Developments in Technical and Regulatory Challenges with Solar Panel Installation
2:45PM - 4:00PM	Lori Myott, Senior Project Engineer, NTH Consultants, Ltd	Waste Management - Michigan Renewable Energy Phased Integration Of A Centralized Processing Facility Power Plant and Sulfur Treatment System - Pine Tree Acres - Lenox, MI
	Tom Bilgri, Manager, Cornerstone Environmental	
	Steve Wilsey, Principal, Conestoga-Rovers & Associates	

You may also register online at www.esd.org

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